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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,137	03/01/2002	Yasushi Tanaka	HYAE:134	2656

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EXAMINER	
RAO, ANAND SHASHIKANT	
ART UNIT	PAPER NUMBER
2621	
MAIL DATE	DELIVERY MODE
08/19/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/085,137	TANAKA ET AL.	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5,6,9 and 12* is/are pending in the application.

4a) Of the above claim(s) *1-4,7,8,10 and 11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5,6,9 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/3/08 has been entered.

2. Applicant's arguments with respect to claims 5-6, 9 and 12 as filed on 6/23/08 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honma et al., (hereinafter referred to as "Honma") in view of Chu.

Honma discloses an encoding circuit that includes a frequency converter for frequency-converting data of a processing target block into frequency components, a quantizer for quantizing the frequency components, and an encoder for variable length coding the quantized frequency components in a predetermined scanning order (Honma: figure 17A); and end of block detector for detecting the end of an encoded block (Honma: column 21, lines 35-60), wherein

said EOB detector outputs a control signal (Honma: figure 19; column 23, lines 30-45) to the quantizer and the encoder (Honma: column 24, lines 5-20), wherein said quantizer is for quantizing the frequency components (Honma: column 21, lines 20-25) as indicated by the control signal (Honma: column 18, lines 40-60), and pausing the quantizing thereafter (Honma: column 24, lines 60-67; column 25, lines 1-20); and said encoder for variable length coding the quantized frequency components as indicated by the control signal, adding an end of block code that indicates an end of effective components, and pauses the variable length coding thereafter (Honma: column 21, lines 60-67; column 22, lines 1-32), as in claim 5. However, Honma fails to explicitly disclose that the EOB detector outputs the position of the non-zero frequency component in a predetermined scanning order as a control signal as in the claim. Chu discloses a video compression system utilizing a vector adaptive transform that generates the position of the last non-zero frequency component in a predetermined scanning order (Chu: column 13, lines 35-50) and subsequent insertion of an EOB signal (Chu: column 14, lines 45-65) as a control signal for reducing the processing time in processing frequency coefficients (Chu: column 13, lines 50-60). Accordingly, given this teaching it would have obvious for one of ordinary skill in the art at the time of the invention to incorporate the Chu teaching of generating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal into the Honma apparatus in order to reduce the processing time of the coding execution in the Honma apparatus. The Honma apparatus, now incorporating the Chu disclosure of generating a signal indicating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal, has all of features of claim 5.

Regarding claim 6, the Honma apparatus, now incorporating the Chu disclosure of generating a signal indicating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal, has wherein the end of block detector is between the frequency converter and the quantizer, and said end of block detector comprises: a memory for temporarily retaining the frequency components of the processing target block from the frequency converter, and outputting the retained frequency components in the predetermined scanning order (Chu: column 45-60); a counter for detecting a position of the frequency component that is inputted from the memory in the predetermined scanning order (Honma: column 24, lines 1-20); a first comparator for comparing the frequency component, using a quantization value as a divisor for dividing the frequency component in the quantizer (Honma: column 23, lines 15-25); and a register for retaining a position of a non-zero quantized frequency component in the predetermined scanning order based on a result of the first comparator (Chu: column 15, lines 50-67), as in the claim.

Honma discloses an encoding method (Honma: figure 16) comprising: frequency-converting data of a processing target block into frequency components (Honma: column 21, lines 20-25); detecting an end of block of the frequency components by comparing the frequency component with a quantization value as a divisor for dividing the frequency components in a quantization process (Honma: column 21, lines 35-45), and detecting the end of an encoded block (Honma: column 21, lines 46-60); quantizing the frequency components (Honma: column 18, lines 40-60), and pausing the quantizing thereafter (Honma: column 24, lines 60-67; column 25, lines 60-67); variable length coding the quantized frequency components (Honma: column 24, lines 5-19), adding an end of block code that indicates an end of effective components

(Honma: column 24, lines 20-30), and pausing the variable length coding thereafter (Honma: column 24, lines 60-67; column 25, lines 1-20), as in claim 9. However, Honma fails to explicitly disclose that the EOB detector outputs the position of the non-zero frequency component in a predetermined scanning order as a control signal as in the claim. Chu discloses a video compression method (Chu: column 17, lines 60-67; column 18, lines 1-18) utilizing a vector adaptive transform that generates the position of the last non-zero frequency component in a predetermined scanning order (Chu: column 13, lines 35-50) and subsequent insertion of an EOB signal (Chu: column 14, lines 45-65) as a control signal for reducing the processing time in processing frequency coefficients (Chu: column 13, lines 50-60). Accordingly, given this teaching it would have obvious for one of ordinary skill in the art at the time of the invention to incorporate the Chu teaching of generating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal into the Honma method in order to reduce the processing time of the coding execution in the Honma apparatus. The Honma method, now incorporating the Chu disclosure of generating a signal indicating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal, has all of features of claim 9.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honma et al., (hereinafter referred to as "Honma") in view of Chu et al., (hereinafter referred to as "Chu") and further in view of Kobayashi.

Honma discloses an encoding method (Honma: figure 16) comprising: frequency-converting data of a processing target block into frequency components (Honma: column 21, lines 20-25); detecting an end of block of the frequency components by comparing the frequency

component with a quantization value as a divisor for dividing the frequency components in a quantization process (Honma: column 21, lines 35-45), and detecting the end of an encoded block (Honma: column 21, lines 46-60); quantizing the frequency components (Honma: column 18, lines 40-60), and pausing the quantizing thereafter (Honma: column 24, lines 60-67; column 25, lines 60-67); variable length coding the quantized frequency components (Honma: column 24, lines 5-19), adding an end of block code that indicates an end of effective components (Honma: column 24, lines 20-30), and pausing the variable length coding thereafter (Honma: column 24, lines 60-67; column 25, lines 1-20), as in claim 12. However, Honma fails to explicitly disclose that the EOB detector outputs the position of the non-zero frequency component in a predetermined scanning order as a control signal or the implementation of the method as a computer program ***on a computer readable medium*** for making a computer implement the method as in the claim. Chu discloses a video compression method (Chu: column 17, lines 60-67; column 18, lines 1-18) utilizing a vector adaptive transform that generates the position of the last non-zero frequency component in a predetermined scanning order (Chu: column 13, lines 35-50) and subsequent insertion of an EOB signal (Chu: column 14, lines 45-65) as a control signal for reducing the processing time in processing frequency coefficients (Chu: column 13, lines 50-60). Accordingly, given this teaching it would have obvious for one of ordinary skill in the art at the time of the invention to incorporate the Chu teaching of generating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal into the Honma method in order to reduce the processing time of the coding execution in the Honma apparatus. The Honma method, now incorporating the Chu disclosure of generating a signal indicating the position of the last non-zero frequency

component in a predetermined scanning order and subsequent insertion of an EOB signal, has a majority of features of claim 12, but still fails to disclose the implementation of the method as a computer program ***on a computer readable medium*** for making a computer implement the method as in the claim. Kobayashi discloses an image encoding method (Kobayashi: figures 1-6) including end of block detection/processing (Kobayashi: column 12, lines 35-50) as implemented on as a computer program on a computer readable medium (Kobayashi: column 24, lines 35-45) in order to have the method implemented across a distributed network (Kobayashi: column 26, lines 50-52). Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art to incorporate the Kobayashi teaching of having a computer program as embodied as instructions on a computer readable medium with the Honma-Chu method in order to have the Honma-Chu method implemented across distributed networks. The Honma method, now incorporating the Chu disclosure of generating a signal indicating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal and implemented as a computer program on a computer readable medium as shown by Kobayashi, has all of the features of claim 12.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. De With discloses a television system for transmitting picture signals in a digital format.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

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/Andy S. Rao/
Primary Examiner, Art Unit 2621
August 17, 2008